

General

Guideline Title

Food and nutrition for older adults promoting health and wellness (FNOA).

Bibliographic Source(s)

Academy of Nutrition and Dietetics. Food and nutrition for older adults promoting health and wellness. Chicago (IL): Academy of Nutrition and Dietetics; 2012. Various p.

Guideline Status

This is the current release of the guideline.

Recommendations

Major Recommendations

Ratings for the strength of the recommendations (Strong, Fair, Weak, Consensus, Insufficient Evidence), conclusion grades (I-V), and statement labels (Conditional versus Imperative) are defined at the end of the "Major Recommendations" field.

Food and Nutrition for Older Adults (FNOA): Weight Management in the Older Adult

FNOA: Considerations for Weight Management in the Older Adult

Regardless of age, the registered dietitian (RD) should consider the following when assessing the need for weight management through modifications in dietary intake and physical activity in older adults:

- Classification of overweight or obesity
- Presence of comorbidities
- Physical function
- Cognitive function
- Attitude toward longevity
- Lifestyle
- Personal choice
- Quality of life

While studies have demonstrated varying associations between assessment indicators of overweight or obesity and physical function and mortality in the older adult, the need for weight loss should be based on input from the physician or geriatrician, RD, qualified exercise specialist and other members of the health care team and will ultimately be the personal decision made by the older adult.

Fair, Imperative

FNOA: Use Multiple Assessment Indicators for Classification of Overweight/Obesity

Regardless of age, the RD should use more than one of the following assessment indicators when classifying overweight or obesity:

- Weight change (and weight history)
- Current (and past) weight, height and body mass index (BMI)
- Waist circumference
- Body composition

More than one assessment indicator should be used, due to the potential limitations of each indicator in the older adult, such as gender and ethnic differences in their application. In addition, studies demonstrated that muscle mass generally decreases and fat mass generally increases over time, even when weight is stable.

Fair, Imperative

Recommendation Strength Rationale

- Conclusion statements are Grades I and II.

FNOA: United States Department of Agriculture (USDA) and Older Americans Act (OAA) Nutrition Service Programs for Older Adults

FNOA: Screen for USDA and OAA Program Eligibility

The RD should screen all older adults for eligibility (or refer for screening) in USDA programs and the OAA Nutrition Service Program and identify potential barriers to participation, such as disability, functional impairment, attitude toward program utilization and income level. Research reported racial and ethnic differences in program participation, as well as in subjects with vision or hearing difficulties, special dietary needs, functional limitations or disabilities.

Fair, Imperative

FNOA: Encourage Participation in USDA and OAA Programs

The RD should encourage eligible older adults to apply for and participate in the following USDA and OAA programs:

USDA

- Supplemental Nutrition Assistance Program (SNAP)
- Senior Farmer's Market Nutrition Program (SFMNP)
- Child and Adult Care Food Program (CACFP)
- Emergency Food Assistance Program
- Commodity Supplemental Food Program (CSFP)

OAA Programs

- OAA Congregate Nutrition Program
- OAA Home Delivered Nutrition Program

Research reported that participation in USDA and OAA programs improved food and nutrient intake, increased fruit and vegetable consumption, stimulated interest in healthy foods, improved quality of life and improved nutritional status. However, some subjects felt that they did not need food assistance and some participants did not know that they were eligible or how to apply.

Fair, Conditional

Recommendation Strength Rationale

- Conclusion statements are Grades II and III.

FNOA: Antioxidant Consumption and Age-Related Macular Degeneration and Cognitive Function in Older Adults

FNOA: Encourage Dietary Reference Intakes (DRI) for All Older Adults

For all older adults, the RD should encourage food intake meeting the Dietary Reference Intakes (or other recommended levels) for antioxidant vitamins and minerals and recommend a multi-vitamin if food intake is low. Studies regarding antioxidant intakes below recommended levels reported an association with cognitive decline, however, research regarding age-related macular degeneration was inconclusive.

Strong, Imperative

FNOA: Collaborate with Others Regarding Treatment of Diagnosed Age-Related Macular Degeneration

- For older adults with diagnosed age-related macular degeneration, the RD should collaborate with others on the inter-professional team (such as physicians, ophthalmologists, pharmacists and other healthcare professionals) to determine whether an older adult would benefit from high-dose supplementation of antioxidants, as some formulations have side-effects and contraindications.
- Studies have found a beneficial effect of antioxidant (beta-carotene, vitamin C and vitamin E), lutein/zeaxanthin and zinc and copper from diet or supplementation on delaying progression of advanced age-related macular degeneration. However, other studies report inconclusive findings.

Strong, Conditional

FNOA: Advise against Antioxidants for Treatment of Diagnosed Cognitive Impairment/Alzheimer's Disease

- For older adults with diagnosed cognitive impairment or Alzheimer's disease, the RD should advise against antioxidant supplementation, as it has not been shown to have an effect and some formulations have side effects and contraindications.
- Findings from studies of antioxidant intake above recommended dietary allowance (RDA) levels in subjects with diagnosed cognitive impairment or Alzheimer's disease demonstrated no difference in the delay of cognitive decline. These findings were substantiated by one systematic Cochrane review.

Strong, Conditional

Recommendation Strength Rationale

- Conclusion statements are Grade II.

Definitions:

Conditional vs Imperative Recommendations

Recommendations can be worded as *conditional* or *imperative* statements. Conditional statements clearly define a specific situation, while imperative statements are broadly applicable to the target population without restraints on their pertinence. More specifically, a conditional recommendation can be stated in if/then terminology (e.g., If an individual does not eat food sources of omega-3 fatty acids, then 1g of EPA and DHA omega-3 fatty acid supplements *may* be recommended for secondary prevention).

In contrast, imperative recommendations "require," or "must," or "should achieve certain goals," but do not contain conditional text that would limit their applicability to specified circumstances. (e.g., Portion control should be included as part of a comprehensive weight management program. Portion control at meals and snacks results in reduced energy intake and weight loss).

Conclusion Grading Table

Strength of Evidence Elements	Grade I Good/Strong	Grade II Fair	Grade III Limited/Weak	Grade IV Expert Opinion Only	Grade V Grade Not Assignable
Quality <ul style="list-style-type: none"> • Scientific rigor/validity • Considers design and execution 	Studies of strong design for question Free from design flaws, bias and execution problems	Studies of strong design for question with minor methodological concerns OR Only studies of weaker study design for	Studies of weak design for answering the question OR Inconclusive findings due to design flaws, bias or execution problems	No studies available Conclusion based on usual practice, expert consensus, clinical experience, opinion, or extrapolation from basic research	No evidence that pertains to question being addressed

Strength of Evidence Elements	Grade I Good/Strong	Grade II Fair/questionable	Grade III Limited/Weak	Grade IV Expert Opinion Only	Grade V Grade Not Assignable
Consistency Of findings across studies	Findings generally consistent in direction and size of effect or degree of association, and statistical significance with minor exceptions at most	Inconsistency among results of studies with strong design OR Consistency with minor exceptions across studies of weaker designs	Unexplained inconsistency among results from different studies OR Single study unconfirmed by other studies	Expert opinion supported solely by statements of informed nutrition or medical commentators	
Quantity <ul style="list-style-type: none">Number of studiesNumber of subjects in studies	One to several good quality studies Large number of subjects studied Studies with negative results having sufficiently large sample size for adequate statistical power	Several studies by independent investigators Doubts about adequacy of sample size to avoid Type I and Type II error	Limited number of studies Low number of subjects studied and/or inadequate sample size within studies	Unsubstantiated by published studies	Relevant studies have not been done
Clinical Impact <ul style="list-style-type: none">Importance of studied outcomesMagnitude of effect	Studied outcome relates directly to the question Size of effect is clinically meaningful Significant (statistical) difference is large	Some doubt about the statistical or clinical significance of effect	Studied outcome is an intermediate outcome or surrogate for the true outcome of interest OR Size of effect is small or lacks statistical and/or clinical significance	Objective data unavailable	Indicates area for future research
Generalizability To population of interest	Studied population, intervention and outcomes are free from serious doubts about generalizability	Minor doubts about generalizability	Serious doubts about generalizability due to narrow or different study population, intervention or outcomes studied	Generalizability limited to scope of experience	NA

This grading system was based on the grading system from Greer, Mosser, Logan, & Wagstrom Halaas. A practical approach to evidence grading. Jt Comm J Qual Improv. 2000;26:700-712. In September 2004, The ADA Research Committee modified the grading system to this current version.

Criteria for Recommendation Rating

Statement Rating	Definition	Implication for Practice
Strong	A Strong recommendation means that the workgroup believes that the benefits of the recommended approach clearly exceed the harms (or that the harms clearly exceed the benefits in the case of a strong negative recommendation), and that the quality of the supporting evidence is excellent/good (grade I or II). [*] In some clearly identified circumstances, strong recommendations may be made based on lesser evidence when high-quality evidence is impossible to obtain and the anticipated benefits strongly outweigh the harms.	Practitioners should follow a Strong recommendation unless a clear and compelling rationale for an alternative approach is present.
Fair	A Fair recommendation means that the workgroup believes that the benefits exceed the harms (or that the harms clearly exceed the benefits in the case of a negative recommendation), but the quality of evidence is not as strong (grade II or III). [*] In some clearly identified circumstances, recommendations	Practitioners should generally follow a Fair recommendation but remain alert to new information and be sensitive to patient preferences.

Statement Rating	Definition	Implication for Practice
Weak	may be made based on lesser evidence when high-quality evidence is impossible to obtain and the anticipated benefits outweigh the harms. A Weak recommendation means that the quality of evidence that exists is suspect or that well-done studies (grade I, II, or III)* show little clear advantage to one approach versus another.	Practitioners should be cautious in deciding whether to follow a recommendation classified as Weak, and should exercise judgment and be alert to emerging publications that report evidence. Patient preference should have a substantial influencing role.
Consensus	A Consensus recommendation means that Expert opinion (grade IV) supports the guideline recommendation even though the available scientific evidence did not present consistent results, or controlled trials were lacking.	Practitioners should be flexible in deciding whether to follow a recommendation classified as Consensus, although they may set boundaries on alternatives. Patient preference should have a substantial influencing role.
Insufficient Evidence	An Insufficient Evidence recommendation means that there is both a lack of pertinent evidence (grade V)* and/or an unclear balance between benefits and harms.	Practitioners should feel little constraint in deciding whether to follow a recommendation labeled as Insufficient Evidence and should exercise judgment and be alert to emerging publications that report evidence that clarifies the balance of benefit versus harm. Patient preference should have a substantial influencing role.

*Conclusion statements are assigned a grade based on the strength of the evidence. Grade I is good; grade II, fair; grade III, limited; grade IV signifies expert opinion only and grade V indicates that a grade is not assignable because there is no evidence to support or refute the conclusion. The evidence and these grades are considered when assigning a rating (Strong, Fair, Weak, Consensus, Insufficient Evidence - see chart above) to a recommendation.

Adapted by the Academy of Nutrition and Dietetics (AND) from the American Academy of Pediatrics, Classifying Recommendations for Clinical Practice Guideline, Pediatrics. 2004;114:874-877. Revised by the AND Evidence-Based Practice Committee, Feb 2006.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

- Health and wellness
- Cognitive impairment
- Age-related macular degeneration

Guideline Category

Counseling

Diagnosis

Evaluation

Management

Prevention

Screening

Treatment

Clinical Specialty

Family Practice

Geriatrics

Neurology

Nursing

Nutrition

Ophthalmology

Optometry

Preventive Medicine

Psychiatry

Psychology

Intended Users

Advanced Practice Nurses

Allied Health Personnel

Dentists

Dietitians

Health Care Providers

Hospitals

Managed Care Organizations

Nurses

Occupational Therapists

Optometrists

Pharmacists

Physical Therapists

Physician Assistants

Physicians

Psychologists/Non-physician Behavioral Health Clinicians

Public Health Departments

Social Workers

Guideline Objective(s)

Overall Objective

To provide evidence-based recommendations on three topics related to food and nutrition for older adults promoting health and wellness

Specific Objectives

- To define evidence-based nutrition recommendations for registered dietitians (RDs) that are carried out in collaboration with other healthcare providers
- To guide practice decisions that integrate medical, nutritional and behavioral strategies
- To reduce variations in practice among RDs
- To provide the RD with data to make recommendations to adjust medical nutrition therapy (MNT) or recommend other therapies to achieve desired outcomes
- To develop guidelines for interventions that have measurable clinical outcomes
- To define the highest quality of care within cost constraints of the current healthcare environment

Target Population

Older adults (aged 60 years and older)

Interventions and Practices Considered

1. Assessing the need for weight management through modifications in dietary intake and physical activity
2. Use of multiple assessment indicators for classification of overweight/obesity
 - Weight change (and weight history)
 - Current (and past) weight, height and body mass index (BMI)
 - Waist circumference
 - Body composition
3. Screening for eligibility for and encouraging participation in United States Department of Agriculture (USDA) and Older Americans Act (OAA) Nutrition Service programs
4. Encouraging food intake meeting the Dietary Reference Intakes (or other recommended levels) for antioxidant vitamins and minerals and recommending a multi-vitamin if food intake is low
5. Collaborating with others on the inter-professional team to determine whether individuals diagnosed with age-related macular degeneration would benefit from high-dose supplementation of antioxidants
6. Advising against antioxidants for treatment of diagnosed cognitive impairment/Alzheimer's disease

Major Outcomes Considered

- Physical function
- Changes in age-related macular degeneration (improvement or progression)
- Cognition levels
- Mortality

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

General Methods for Collecting/Selecting the Evidence

The following list provides an overview of the steps which the Academy evidence analysis team goes through to identify research through database searches.

1. Plan the search strategy to identify the "current best evidence" relevant to the question. The plan for identification and inclusion of articles and reports should be systematic and reproducible, not haphazard. Write out the original search strategy and document adjustments to the strategy if they occur. Allow for several iterations of searches.
2. List inclusion and exclusion criteria. The workgroup will define the inclusion and exclusion criteria. These criteria will be used in defining the search strategy and for filtering the identified research reports. The Academy uses only peer-reviewed research; that is, articles accepted for evidence analysis must be peer-reviewed and published in a peer-reviewed publication. Additionally, the Academy only uses human subjects in its research and does not include animal studies in its evidence analysis.
3. Identify search words. During the process of considering outcomes, interventions, nutrition diagnoses, and assessments, the work group may have identified a number of specific terms or factors that were important, but were not included in the actual question. These terms can be used as additional search terms to help identify relevant pieces of research. Both text word search and keyword search using Medical Subject Headings (MeSH) definitions may be used.
4. Identify databases to search. PubMed, Medline, CINAHL, EMBASE, Cochrane, Agricola, DARE, TRIP, AHRQ and ERIC are some common databases for clinical nutritional research. Note that search terms can vary depending on the database.
5. Conduct the search. Depending on the number and type of sources found in the initial search, adjustments might have to be made in the search strategy and to inclusion/exclusion criteria, and additional searches run. Changes to the search plan should be recorded for future reference. Document the number of sources identified in each search.
6. Review titles and abstracts. At this point, a filtering procedure is used to determine whether a research article matches the inclusion criteria and is relevant to the work group's questions. Typically, the lead analyst, along with a member of the expert workgroup, first reviews the citations and abstracts to filter out reports that are not applicable to the question. If a determination cannot be made based on the citation and abstract, then the full text of the article is obtained for review.
7. Gather all remaining articles and reports. Obtain paper or electronic copies of research articles that remain on the list following the citation and abstract review. If there are less than six citations, it could mean that the search was too specific to identify relevant research or that research has not been done on this topic. A broadened search should be tried. When there is a long list of citations, ascertain whether it includes articles that are tangential to the question or address the question in only a general way. In this case a more focused search strategy may be necessary.

Specific Methods for This Guideline

The recommendations in the guideline were based on a systematic review of the literature. Searches of PubMed database were performed on the following topics:

- Weight management in older adults
- United States Department of Agriculture (USDA) an Older Americans Act (OAA) programs in older adults
- Antioxidant consumption and age-related macular degeneration and cognitive function in older adults

Each evidence analysis topic has a link to supporting evidence in the original guideline, where the Search Plan and Results can be found. Here the reader can view when the search plan was performed, specific inclusion and exclusion criteria, search terms, data bases that were searched, and the excluded articles.

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Conclusion Grading Table

Strength of Evidence Elements	Grade I Good/Strong	Grade II Fair	Grade III Limited/Weak	Grade IV Expert Opinion Only	Grade V Grade Not Assignable
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Quantity <ul style="list-style-type: none"> Number of studies Number of subjects in studies 	One to several good quality studies Large number of subjects studied Studies with negative results having sufficiently large sample size for adequate statistical power	Several studies by independent investigators Doubts about adequacy of sample size to avoid Type I and Type II error	Limited number of studies Low number of subjects studied and/or inadequate sample size within studies	Unsubstantiated by published studies	Relevant studies have not been done
Clinical Impact <ul style="list-style-type: none"> Importance of studied outcomes Magnitude of effect 	Studied outcome relates directly to the question Size of effect is clinically meaningful Significant (statistical) difference is large	Some doubt about the statistical or clinical significance of effect	Studied outcome is an intermediate outcome or surrogate for the true outcome of interest OR Size of effect is small or lacks statistical and/or clinical significance	Objective data unavailable	Indicates area for future research
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Methods Used to Analyze the Evidence

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

Step 1: Formulate Evidence Analysis Question

Specify a question in a defined area of practice; or state a tentative conclusion or recommendation that is being considered. Include the patient type and special needs of the target population involved, the alternatives under consideration, and the outcomes of interest (PICO format).

Step 2: Gather and Classify Evidence

Conduct a systematic search of the literature to find evidence related to the question, gather studies and reports, and classify them by type of evidence. Classes differentiate primary reports of new data according to study design, and distinguish them from secondary reports that include systematic and/or narrative review.

Step 3: Critically Appraise Each Article

Review each article for relevance to the question and use the checklist of questions to evaluate the research design and implementation. Abstract key information from the report.

Step 4: Summarize Evidence

Synthesize the reports into an overview table and summarize the research relevant to the question.

Step 5: Write and Grade the Conclusion Statement

Develop a concise conclusion statement (the answer to the question). Assign a grade to indicate the overall strength or weakness of evidence informing the conclusion statement (see the "Rating Scheme for the Strength of the Evidence" field).

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Moving from Analysis to the Evidence-Based Nutrition Practice Guideline

The expert work group, which includes practitioners and researchers with a depth of experience in the specific field of interest, develops the disease-specific guideline. The guideline development involves the following steps:

Review the Conclusion Statements

The work group meets to review the materials resulting from the evidence analysis, which may include conclusion statements, evidence summaries, and evidence worksheets.

Formulate Recommendations for the Guideline Integrating Conclusions from Evidence Analysis

The work group uses an expert consensus method to formulate the guideline recommendations and complete the various sections on the recommendation page. These include:

- Recommendation(s): This is a course of action for the practitioner. The recommendation is written using two brief and separate statements. The first statement is "what" the dietitian should do or not do. The second statement describes the "why" of the recommendation. More than one recommendation may be formulated depending on a particular topic and the supporting conclusion statements.
- Rating: The rating for the recommendation is based on the strength of the supporting evidence. The grade of the supporting conclusion statement(s) will be helpful in determining this rating (see the "Rating Scheme for the Strength of the Recommendations" field).
- Label of Conditional or Imperative: Each recommendation will have a label of "conditional" or "imperative." Conditional statements clearly

define a specific situation, while imperative statements are broadly applicable to the target population without restraints on their pertinence.

- **Risks and Harms of Implementing the Recommendations:** Includes any potential risks, anticipated harms or adverse consequences associated with applying the recommendation(s) to the target population.
- **Conditions of Application:** Includes any organizational barriers or changes that would need to be made within an organization to apply the recommendation in daily practice. Also includes any conditions which may limit the application of the recommendation(s). For instance, application may be limited to only people in an inpatient setting, or not applicable for pregnant women. Conditional recommendations will always have conditions specified. Imperative recommendations may have some general conditions for application.
- **Potential Costs Associated with Application:** Includes any costs that may be associated with the application of this recommendation such as specialized staff, new equipment or treatments.
- **Recommendation Narrative:** Provides a brief description of the evidence that supports this recommendation.
- **Recommendation Strength Rationale:** Provides a brief list of the evidence strength and methodological issues that determined the recommendation strength.
- **Minority Opinions:** If the expert work group cannot reach consensus on the recommendation, the minority opinions may be listed here.
- **Supporting Evidence:** Provides links to the conclusions statements, evidence summaries and worksheets related to the formulation of this recommendation(s).

References Not Graded in the Academy's Evidence Analysis Process

Recommendations are based on the summarized evidence from the analysis. Sources that are not analyzed during the evidence analysis process may be used to support and formulate the recommendation or to support information under other categories on the recommendation page, if the workgroup deems necessary. References must be credible resources (e.g., consensus reports, other guidelines, position papers, standards of practice, articles from peer-reviewed journals, nationally recognized documents or websites). If recommendations are based solely on these types of references, they will be rated as "consensus."

Occasionally recommendations will include references that were not reviewed during the evidence analysis process but are relevant to the recommendation, risks and harms of implementing the recommendation, conditions of application, or potential costs associated with application. These references will be listed on the recommendation page under "References Not Graded in the Academy's Evidence Analysis Process."

Complete the Writing of the Guideline

Each disease-specific guideline has a similar format which incorporates the Introduction (includes: Scope of the Guideline, Statement of Intent, Guideline Methods, Implementation, Benefits and Risks/Harms of Implementation), Background Information and any necessary Appendices. The work group develops these features.

Criteria Used in Guideline Development

The criteria used in determining the format and process for development of Academy's guidelines are based on the following tools and criteria for evidence-based guidelines:

- Guideline Elements Model (GEM) which has been incorporated by the American Society for Testing and Materials (ASTM) as a Standard Specification for clinical practice guidelines.
- AGREE (Appraisal for Guidelines Research and Evaluation) Instrument
- National Guideline Clearinghouse www.guideline.gov

Rating Scheme for the Strength of the Recommendations

Criteria for Recommendation Rating

Statement Rating	Definition	Implication for Practice
Strong	A Strong recommendation means that the workgroup believes that the benefits of the recommended approach clearly exceed the harms (or that the harms clearly exceed the benefits in the case of a strong negative recommendation), and that the quality of the supporting evidence is excellent/good (grade I or II). [*] In some clearly identified circumstances, strong recommendations may be made based on lesser evidence when high-quality evidence is impossible to obtain and the anticipated benefits strongly	Practitioners should follow a Strong recommendation unless a clear and compelling rationale for an alternative approach is present.

Statement	Definition	Implication for Practice
Fair	outweigh the harms. A Fair recommendation means that the workgroup believes that the benefits exceed the harms (or that the harms clearly exceed the benefits in the case of a negative recommendation), but the quality of evidence is not as strong (grade II or III).* In some clearly identified circumstances, recommendations may be made based on lesser evidence when high-quality evidence is impossible to obtain and the anticipated benefits outweigh the harms.	Practitioners should generally follow a Fair recommendation but remain alert to new information and be sensitive to patient preferences.
Weak	A Weak recommendation means that the quality of evidence that exists is suspect or that well-done studies (grade I, II, or III)* show little clear advantage to one approach versus another.	Practitioners should be cautious in deciding whether to follow a recommendation classified as Weak, and should exercise judgment and be alert to emerging publications that report evidence. Patient preference should have a substantial influencing role.
Consensus	A Consensus recommendation means that Expert opinion (grade IV) supports the guideline recommendation even though the available scientific evidence did not present consistent results, or controlled trials were lacking.	Practitioners should be flexible in deciding whether to follow a recommendation classified as Consensus, although they may set boundaries on alternatives. Patient preference should have a substantial influencing role.
Insufficient Evidence	An Insufficient Evidence recommendation means that there is both a lack of pertinent evidence (grade V)* and/or an unclear balance between benefits and harms.	Practitioners should feel little constraint in deciding whether to follow a recommendation labeled as Insufficient Evidence and should exercise judgment and be alert to emerging publications that report evidence that clarifies the balance of benefit versus harm. Patient preference should have a substantial influencing role.

*Conclusion statements are assigned a grade based on the strength of the evidence. Grade I is good; grade II, fair; grade III, limited; grade IV signifies expert opinion only and grade V indicates that a grade is not assignable because there is no evidence to support or refute the conclusion. The evidence and these grades are considered when assigning a rating (Strong, Fair, Weak, Consensus, Insufficient Evidence - see chart above) to a recommendation.

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Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

External Peer Review

Internal Peer Review

Description of Method of Guideline Validation

Each guideline is reviewed internally and externally using the AGREE (Appraisal of Guidelines for Research and Evaluation) Instrument as the evaluation tool. The external reviewers consist of an interdisciplinary group of individuals (may include dietitians, doctors, psychologists, nurses, etc.). The guideline is adjusted by consensus of the expert panel and approved by Academy's Evidence-Based Practice Committee prior to publication on the Evidence Analysis Library (EAL).

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

The guideline contains conclusion statements that are supported by evidence summaries and evidence worksheets. These resources summarize the important studies (randomized controlled trials [RCTs], clinical studies, observational studies, cohort and case-control studies) pertaining to the conclusion statement and provide the study details.

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

- A primary goal of implementing these recommendations includes improving a person's ability to achieve optimal nutrition through healthful food choices and a physically-active lifestyle.
- Although costs of medical nutrition therapy (MNT) sessions and reimbursement vary, MNT is essential for improved outcomes.
- MNT education can be considered cost-effective when considering the benefits of nutrition interventions on the onset and progression of comorbidities versus the cost of the intervention.

Potential Harms

Overall Risk/Harm Considerations

Safety issues must be reviewed carefully for each individual. When using these recommendations, consider the following general risks and harms:

- Review the patient's age, socio-economic status, cultural issues, health history and other health conditions.
- Consider referral to a behavioral specialist if psycho-social issues are a concern.
- Consider a referral to social services to assist patients with financial arrangements if economic issues are a concern.
- Use clinical judgment in applying the guidelines.

Recommendation-Specific Risks/Harms

Potential Harms Identified by the National Institutes of Health (NIH) State-of-the-Science Conference Statement on Multi-vitamin/Mineral Supplements and Chronic Disease Prevention

- There is evidence that certain ingredients in multi-vitamin/mineral (MVM) supplements can produce adverse effects, including reports from randomized controlled trials (RCTs) that noted excess lung cancer occurring in asbestos workers and smokers consuming beta-carotene. In addition, esophageal cancer excess was found with long-term follow-up of older Chinese patients treated with selenium, beta-carotene and vitamin E supplements. There was also evidence for gender difference in patterns of lung cancer and cardiovascular disease risk related to beta-carotene. In another study, patients with elevated prostate-specific antigen levels at baseline who were receiving an MVM intervention had higher incidence of prostate cancer.
- Vitamin D and calcium may increase the risk for kidney stones for certain people. These data raise safety questions both in general and in special populations. Although these studies are not definitive, they do suggest possible safety concerns that should be monitored for primary components of multi-vitamins.
- There is potential for adverse effects in individuals consuming dietary supplements that are above the upper level. This can occur, not only in individuals consuming high-potency single-nutrient supplements, but also in individuals who consume a healthy diet rich in fortified foods, in combination with MVM supplements. Furthermore, by law, the listing of ingredient amounts on nutrient supplement labels is the minimum content, thus higher intakes are probable. Data from prospective studies have shown that individuals taking MVM dietary supplements improved their nutritional adequacy with respect to several nutrients, but also increased the proportion of their intakes above the upper level for several of the supplemented nutrients. With the strong trends of increasing MVM and other dietary supplement consumption and the increasing fortification of the US diet, the guideline developers are concerned that a growing proportion of the population may be consuming levels considerably above the upper level, thus increasing the possibility of adverse effects.

Qualifying Statements

Qualifying Statements

- While the evidence-based nutrition practice guidelines represent a statement of best practice based on the latest available evidence at the time of publishing, they are not intended to overrule professional judgment. Rather, they may be viewed as a relative constraint on individual clinician discretion in a particular clinical circumstance. The independent skill and judgment of the health care provider must always dictate treatment decisions. These nutrition practice guidelines are provided with the express understanding that they do not establish or specify particular standards of care, whether legal, medical or other.
- This nutrition practice guideline is meant to serve as a general framework for handling clients with particular health problems. It may not always be appropriate to use these nutrition practice guidelines to manage clients because individual circumstances may vary. For example, different treatments may be appropriate for clients who are severely ill or who have co-morbid, socioeconomic, or other complicating conditions.

The Role of Patient Preference

- This guideline recognizes the role of patient preferences for possible outcomes of care, when the appropriateness of a clinical intervention involves a substantial element of personal choice or values. With regard to types of evidence that are associated with particular outcomes, two major classes have been described. Patient-oriented evidence that matters (POEM) deals with outcomes of importance to patients, such as changes in morbidity, mortality or quality of life. Disease-oriented evidence (DOE) deals with surrogate end-points, such as changes in laboratory values or other measures of response. Although the results of DOE sometimes parallel the results of POEM, they do not always correspond.
- When possible, the Academy of Nutrition and Dietetics recommends using POEM-type evidence rather than DOE. When DOE is the only guidance available, the guideline indicates that key clinical recommendations lack the support of outcomes evidence.

Implementation of the Guideline

Description of Implementation Strategy

The publication of these recommendations is an integral part of the plans for getting the Academy of Nutrition and Dietetics evidence-based recommendations on critical illness to all dietetics practitioners engaged in, teaching about, or researching critical illness as quickly as possible. National implementation workshops at various sites around the country and during the Academy Food Nutrition Conference Expo (FNCE) are planned. Additionally, there are recommended dissemination and adoption strategies for local use.

The recommendation development team recommended multi-faceted strategies to disseminate the guideline and encourage its implementation. Management support and learning through social influence are likely to be effective in implementing guidelines in dietetic practice. However, additional interventions may be needed to achieve real change in practice routines.

Implementation of the recommendations will be achieved by announcement at professional events, presentations and training. Some strategies include:

- National and Local Events – State dietetic association meetings and media coverage will help launch the guideline.
- Local Feedback Adaptation – Presentation by members of the work group at peer review meetings and opportunities for continuing education units (CEUs) for courses completed
- Education Initiatives – The recommendations will be freely available for use in the education and training of dietetic interns and students in approved Commission on Accreditation of Dietetics Education (CADE) programs.
- Champions – Local champions have been identified and expert members of the recommendation team will prepare articles for publications. Resources will be provided that include PowerPoint presentations and pre-prepared case studies.
- Practical Tools – Some of the tools that will be developed to help implement the guideline include specially designed resources such as slide presentations and training webinars.

Specific distribution strategies include:

Publication in Full – The recommendations are available electronically at the [Academy of Nutrition and Dietetics Evidence Analysis Library Web site](#) and announced to all Academy Dietetic Practice Groups. The Academy's Evidence Analysis Library will also provide downloadable supporting information and links to relevant position papers.

Implementation Tools

Quick Reference Guides/Physician Guides

Slide Presentation

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Living with Illness

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

Academy of Nutrition and Dietetics. Food and nutrition for older adults promoting health and wellness. Chicago (IL): Academy of Nutrition and Dietetics; 2012. Various p.

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2012

Guideline Developer(s)

Academy of Nutrition and Dietetics - Professional Association

Source(s) of Funding

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research, assignment of grades, and development of recommendations.

Guideline Committee

Food and Nutrition for Older Adults Promoting Health and Wellness Expert Work Group

Composition of Group That Authored the Guideline

Workgroup Members: Nancy M. Munoz, MHA, DCN, RD, LDN (*Chair*); Melissa A. Bernstein, PhD, RD, LD; Joan G. Fischer, PhD, RD; Kathleen T. Morgan, Dr. M.H., DTR; Susan Saffel-Shrier, MS, RD, CD; Edward H. Weiss, PhD, RD

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In the interest of full disclosure, the Academy has adopted the policy of revealing relationships work group members have with companies that sell products or services that are relevant to this guideline topic. Work group members are required to disclose potential conflicts of interest by completing the Academy Conflict of Interest Form. It should not be assumed that these financial interests will have an adverse impact on the content of the guideline, but they are noted here to fully inform readers.

No work group members have potential conflicts of interest to disclose.

Guideline Status

This is the current release of the guideline.

Guideline Availability

Electronic copies: Available to members from the [Academy of Nutrition and Dietetics Web site](#) .

Availability of Companion Documents

The following are available:

- Academy of Nutrition and Dietetics food and nutrition for older adults promoting health and wellness (FNOA) guideline. Executive summary of recommendations. Chicago (IL): Academy of Nutrition and Dietetics; 2012. Available from the [Academy of Nutrition and Dietetics \(AND\) Web site](#) .
- Academy of Nutrition and Dietetics food and nutrition for older adults promoting health and wellness (FNOA) guideline presentation. Slide set. 29 p. Chicago (IL): Academy of Nutrition and Dietetics; 2012. Electronic copies: Available for purchase from the [AND Web site](#) .

Patient Resources

None available

NGC Status

This NGC summary was completed by ECRI Institute on March 25, 2013.

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When modifying the guidelines for local circumstances, significant departures from these comprehensive guidelines should be fully documented and the reasons for the differences explicitly detailed.

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